



dependent diabetes mellitus. J.Clin.Invest. 74:1318-1328. The incremental insulin and C-peptide responses were similar for diabetic patients. The priming effect of the  $\beta$ -cell during the 45 min of hyperglycemic clamp may explain the higher absolute insulin and C-peptide responses during the arginine clamp.

Thus, even in patients with type II diabetes, the maximal secretory rate of the  $\beta$ -cell can only be elicited with a combination of very high glucose concentrations (i.e. much higher than the patients' daily glucose levels) and an additional potent secretagogue which could be either GLP-1 or arginine. However, the patients' capacity to secrete an amount of insulin as elicited by physiological stimuli such as e.g. ingestion of a mixed meal, may be gauged rapidly and conveniently and with little discomfort for the patients with as little as 2.5 nmol of GLP-1 I.V.

An optimal test in the outpatient clinic may be the combined glucose/GLP-1 injection in which similar basal blood glucose is obtained in type II diabetic patients and healthy subjects before stimulation with GLP-1.

GLP-1 can be administered intravenously or subcutaneously, and can be administered continuously or by bolus injection. Total administration can be together with, before or after glucose injection or infusion. The following doses can be used: For continuous infusion by intravenous (I.V.) 0.1 pmol/kg/min to 10 pmol/kg/min and by subcutaneous (S.C.) 0.1 pmol/kg/min to 25 pmol/kg/min, and for single injection (bolus) by I.V. 0.005 nmol/kg to 20 nmol/kg and S.C. 0.1 nmol/kg to 100 nmol/kg.

The term "GLP-1", or glucagon-like peptide, includes mimetics, and as used in the context of the present invention can be comprised of glucagon-like peptides and related peptides and analogs of glucagon-like peptide-1 that bind to a glucagon-like peptide-1 (GLP-1) receptor protein such as the GLP-1 (7-36) amide receptor protein and has a corresponding biological effect on insulin secretion as GLP-1 (7-36) amide, which is a native, biologically active form of